

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A computer-implemented method of operating a reference monitor simulator to recreate operations performed by a reference monitor on a computer system, the method comprising:
  - defining at least one security rule specifying whether to allow a request to access at least one resource;
  - supplying at least one request to access a resource;
  - applying the at least one security rule in response to the at least one request to access ~~[[a]]~~the resource to determine whether to allow the at least one request and to control whether access is granted to the resource; and
  - controlling the reference monitor simulator to operate at an accelerated rate as compared to an actual reference monitor by providing at least one parameter that defines a system environment in which the reference monitor simulator executes,
  - where the at least one parameter includes a time parameter that controls one or more of, eliminating a time gap between trace requests, indicating that a time period between portions of a trace request has elapsed, and running a system clock faster than real-time,
  - where the method being run, at least in part, as an event-driven kernel process.
- 2.-5. (Canceled)
6. (Previously Presented) The method of claim 1, comprising:
  - assessing the effectiveness of the at least one security rule.
7. (Previously Presented) The method of claim 6, wherein assessing the effectiveness of the security rule comprises determining at least one of, the number of improper access requests prevented, and the number of proper access requests allowed.
8. (Previously Presented) The method of claim 6, wherein assessing the

effectiveness of the security rule comprises determining a rate of improper requests prevented.

9. (Currently Amended) The method of claim 1, where providing at least one request to access ~~[[a]]the~~ resource comprises an application program supplying the at least one request to access ~~[[a]]the~~ resource.

10. (Currently Amended) The method of claim 1, where supplying at least one request to access ~~[[a]]the~~ resource comprises capturing at least one request to access ~~[[a]]the~~ resource before supplying the at least one request to access ~~[[a]]the~~ resource.

11. (Currently Amended) The method of claim 10, where ~~[[a]]the actual~~ reference monitor performs the capture of the at least one request to access ~~[[a]]the~~ resource.

12. (Currently Amended) The method of claim 11, where the actual reference monitor that performs the capture of the at least one request to access ~~[[a]]the~~ resource is the same type of reference monitor as the reference monitor whose operations are recreated by the reference monitor simulator.

13. (Currently Amended) The method of claim 10, where the captured at least one request to access ~~[[a]]the~~ resource is an improper request.

14. (Previously Presented) The method of claim 13, where an improper request comprises a request issued by an application in response to one of, a virus, and a buffer overrun attack.

15. (Currently Amended) The method of claim 10, where the captured at least one request is modified prior to supplying the at least one request to access ~~[[a]]the~~ resource.

16. (Previously Presented) The method of claim 15, where the modification is

performed by a user.

17. (Currently Amended) The method of claim 6, where an electronic file system stores the at least one security rule, and

where ~~assessing~~ assessing the effectiveness of the at least one security rule comprises the reference monitor simulator accessing the security rule in the electronic file system in response to receiving the at least one request to access ~~[[a]]~~the resource.

18. (Previously Presented) The method of claim 1, where the at least one parameter provided to the reference monitor simulator comprises at least one of a system clock, a wrapper function, and a timer event.

19. (Previously Presented) The method of claim 1, comprising:  
maintaining statistics on the operation of the reference monitor simulator.

20. (Currently Amended) The method of claim 19, wherein the statistics include at least one of, the number of requests per resource, number of total requests, type of request per resource, total of each type of request, number of queries, number of callbacks, number of requests allowed compared to number of requests expected, and number of requests prevented compared to number of prevented requests expected.

21. - 40. (Canceled)

41. (Currently Amended) A system for providing a reference monitor simulator for simulating the operations performed by a reference monitor, the system comprising:

one or more processors;

a definer component to define at least one security rule specifying whether to allow or deny a request to access at ~~[[ - ]]~~ least one resource under a given set of circumstances, where the definer component is implemented in computer hardware;

a supplier component to supply at least one request to access a resource, where the supplier component is implemented in computer hardware; and

an applier component to apply the at least one security rule in response to the at least one request to access the resource to determine whether to allow or prevent the at least one request, where the applier component is implemented in computer hardware;

and a control component to control the reference monitor simulator to operate at an accelerated rate as compared to an actual reference monitor by providing at least one parameter that defines a system environment in which the reference monitor simulator executes, where the control component is implemented in computer hardware,

where the at least one parameter includes a time parameter, where the time parameter that controls one or more of, eliminating a time gap between trace requests, indicating that a time period between portions of a trace request has elapsed, and running a system clock faster than real-time,

where the applier component and control component operate, at least in part, at the kernel level, and where the system is event-driven.

42. - 45. (Canceled)

46. (Previously Presented) The system of claim 41, comprising an assessor component to assess the effectiveness of the at least one security rule.

47. (Previously Presented) The system of claim 46, where assessing the effectiveness of the security rule comprises determining at least one of, the number of improper access requests prevented, and the number of proper access requests allowed.

48. (Previously Presented) The system of claim 46, where assessing the effectiveness of the security rule comprises determining a rate of improper requests prevented.

49. (Previously Presented) The system of claim 41, comprising an application program to supply the supplier component with the at least one request to access the

resource.

50. (Currently Amended) The system of claim 41, comprising a capture component to capture at least one request to access a before supplying the at least one request to access ~~[[a]]~~the resource.

51. (Previously Presented) The system of claim 50, where the capture component includes a second reference monitor.

52. (Previously Presented) The system of claim 51, where the second reference monitor is a same type of reference monitor as the reference monitor whose operations are recreated by the reference monitor simulator.

53. (Currently Amended) The system of claim 50, wherein the capture component captures at least one improper request to access ~~[[a]]~~the resource.

54. (Previously Presented) The system of claim 53, wherein an improper request comprises a request issued by an application in response to one of, a virus, and a buffer overrun attack.

55. (Currently Amended) The system of claim 50, comprising a modification component to modify at least one captured request prior to supplying the at least one request to access ~~[[a]]~~the resource.

56. (Previously Presented) The system of claim 55, where the modification component takes input from a user.

57. (Currently Amended) The system of claim 41, comprising an electronic file system that stores the at least one security rule, and where the applicer component accesses the security rule in the electronic file system in response to receiving at least one

request to access [[a]]the resource.

58. (Previously Presented) The system of claim 41, wherein the provider component provides at least one parameter to the reference monitor simulator which includes at least one of a system clock, a wrapper function, and a timer event.

59. (Previously Presented) The system of claim 41, comprising:  
a statistics component to maintain statistics on the operation of the reference monitor simulator.

60. (Previously Presented) The system of claim 59, where the statistics component maintains statistics that include at least one of, the number of requests per resource, number of total requests, type of request per resource, total of each type of request, number of queries, number of callbacks, number of requests allowed compared to number of requests expected, and number of requests prevented compared to number of prevented requests expected.

61. (New) A computer-readable medium encoded with computer instructions, which when executed on a processor, perform a method of operating a reference monitor simulator to recreate operations performed by a reference monitor on a computer system, the method comprising:

defining at least one security rule specifying whether to allow a request to access at least one resource;

supplying at least one request to access a resource;

applying the at least one security rule in response to the at least one request to access the resource to determine whether to allow the at least one request and to control whether access is granted to the resource; and

controlling the reference monitor simulator to operate at an accelerated rate as compared to an actual reference monitor by providing at least one parameter that defines a system environment in which the reference monitor simulator executes,

wherein the at least one parameter includes a time parameter that controls one or more of, eliminating a time gap between trace requests, indicating that a time period between portions of a trace request has elapsed, and running a system clock faster than real-time,

wherein the method being run, at least in part, as an event-driven kernel process.

62. (New) The computer-readable medium of claim 61, further comprising instructions, which when executed on the processor, perform:

assessing the effectiveness of the at least one security rule.

63. (New) The computer-readable medium of claim 62, wherein assessing the effectiveness of the security rule comprises determining at least one of, the number of improper access requests prevented, and the number of proper access requests allowed.

64. (New) The computer-readable medium of claim 62, wherein assessing the effectiveness of the security rule comprises determining a rate of improper requests prevented.

65. (New) The computer-readable medium of claim 61, wherein providing at least one request to access the resource comprises an application program supplying the at least one request to access the resource.

66. (New) The computer-readable medium of claim 61, wherein supplying at least one request to access the resource comprises capturing at least one request to access the resource before supplying the at least one request to access the resource.

67. (New) The computer-readable medium of claim 66, wherein the actual reference monitor performs the capture of the at least one request to access the resource.

68. (New) The computer-readable medium of claim 67, wherein the actual reference

monitor that performs the capture of the at least one request to access the resource is the same type of reference monitor as the reference monitor whose operations are recreated by the reference monitor simulator.

69. (New) The computer-readable medium of claim 66, wherein the captured at least one request to access the resource is an improper request.
70. (New) The computer-readable medium of claim 69, wherein an improper request comprises a request issued by an application in response to one of a virus, and a buffer overrun attack.
71. (New) The computer-readable medium of claim 66, wherein the captured at least one request is modified prior to supplying the at least one request to access the resource.
72. (New) The computer-readable medium of claim 71, wherein the modification is performed by a user.
73. (New) The computer-readable medium of claim 62, wherein an electronic file system stores the at least one security rule, and  
wherein assessing the effectiveness of the at least one security rule comprises the reference monitor simulator accessing the security rule in the electronic file system in response to receiving the at least one request to access the resource.
74. (New) The computer-readable medium of claim 61, wherein the at least one parameter provided to the reference monitor simulator comprises at least one of a system clock, a wrapper function, and a timer event.
75. (New) The computer-readable medium of claim 69, further comprising instructions, which when executed on the processor, perform:



maintaining statistics on the operation of the reference monitor simulator.

76. (New) The computer-readable medium of claim 75, wherein the statistics include at least one of: the number of requests per resource, number of total requests, type of request per resource, total of each type of request, number of queries, number of callbacks, number of requests allowed compared to number of requests expected, and number of requests prevented compared to number of prevented requests expected.